

## **Red Mountain Flume Chessman Reservoir**

### **Scoping Design Features**

**March 15, 2013**

The following design features were submitted by the Red Mountain Flume Chessman Reservoir interdisciplinary team (IDT) and compiled specifically for this project. These features are considered to be an integral part of the proposed action that was mailed to the public on March 15, 2013 for public review.

#### **Silviculture**

- Whitebark and limber pine trees would be retained where they occur, and damage to these species from implementation activities would be limited to the extent possible.
- Where living residual trees are available, the healthiest, generally largest, windfirm, and most fire resistant seral species would be selected for retention at the desired distribution or spacing specified in detailed silviculture prescriptions.
- A minimum level of coarse woody debris would be retained in the Chessman units to ensure long-term site productivity. The Flume units may contain less coarse woody debris as these areas will be managed as fuel breaks in the long-term.
- Detailed diagnoses and prescriptions would be completed prior to implementation.
- Reforestation to appropriate stocking levels would be assured following regeneration harvests (clearcut with leave trees). Natural regeneration is prescribed. If natural regeneration is not successful for any reason, including the timing of fuel reduction prescribed burning, planting would occur. Appropriate stocking would be relatively open (100 TPA minimum at year 5) to provide for mitigated fuel conditions over time, with fire resilient seral species preferred.

#### **Water/soils**

- Streamside Management Zone (SMZ) alternative practice may be required for open-ditch portions of flume, which may be considered “Other Bodies of Water” under SMZ law.
- Project will comply with all requirements of SMZ law where it applies.
- Prescribed fire ignition should not occur within buffers upslope of the open-ditch portions of the flume, along channels above flume, and around Chessman Reservoir. Widths of buffers are to be determined in hydrology analysis.
- Avoid fire-line construction throughout the project area.
- Mitigation measures in the National Best Management Practices for Water Quality Management on National Forest System Lands (Volume 1: National Core BMP Technical Guide—USDA, 2012) should be followed where applicable.
- Surfaces cleared of vegetation by burning or harvest activities should be stabilized and seeded with an approved weed-free native seed mix where prescribed in soils analysis.
- Do not pile fuels or burn piles within wetlands or wet soil types.
- Maximize the distance between burn piles and the flume and reservoir.

- Where possible, construct piles to be small (ideally no larger than ~6' x 6') to minimize exposed soil resulting from concentrated burning.
- Where possible, use flat areas for burn piles to reduce erosion of soils in the burn pile areas.
- Monitor piles for erosion for the first 1-2 years after burning.
- If evidence of erosion is identified at pile sites, rehabilitate the burn pile areas by slashing, seeding and potentially applying straw mulch or other surface stabilization.
- Where mechanical equipment exposes mineral soil, ruts should be filled and surface should be stabilized as needed to avoid erosion, based on criteria to be identified in the soils analysis.
- Mechanical equipment use should be avoided where soils are wet or unstable—winter conditions may be required in some units, based on soils analysis.
- Mechanical equipment use should be limited to slopes less than 35%.
- Soil organic matter losses should be kept to a minimum by conducting prescribed burning when the forest floor is moist—ideally in winter conditions.
- Design burn prescriptions to retain adequate ground cover that will limit surface erosion rates to comply with Region 1 soil management guidelines of generally less than 1 to 2 tons per acre per year (note ground cover can include plant duff or litter, coarse woody material that is in contact with the ground, basal vegetation, and rocks greater than 2 inch diameter).
- Minimize areas of detrimental soil disturbance caused by severe burning by designing burn prescriptions to achieve low fire intensity. Conduct prescribed fires to minimize the residence time on the soil while meeting the burn objectives. Manage fire intensity to maintain low soil temperature and duff and residual vegetative cover within the limits in the prescribed fire plan (USDA, 2012).

### **Wildlife**

- Where aspen clones exist, efforts would be made to protect and enhance these clones by removal of other competing conifer and clearing trees around the perimeter to allow for increased aspen.
- Wet sites including any wetlands, seeps, and springs, would be protected by avoidance from equipment and by retaining woody debris, young conifers, and shrubs around these sites.
- A site visit would be conducted prior to implementation to determine goshawk nest use and presence in the vicinity of the flume. Options would be assessed at that time due to the continued forest stand flux due to the insect infestation.

### **Plants**

- Along with the Whitebark pine retention as mentioned in the Silviculture section, other sensitive plant populations would be protected by avoidance from this proposal's ground disturbance activities by identification of sensitive plant centers on the ground prior to implementation.
- Herbicides would not be applied within 100 feet of any known sensitive plants with the buffers clearly identified prior to treatment.
- Maps of known populations within would be reviewed prior to each implementation season.

### **Heritage**

The site of the Chessman Reservoir including the dam and the feature of the Red Mountain Flume appear to be eligible for nomination to the National Register of Historic Places, therefore, to help preserve those qualities, a combination of the following would be included where appropriate.

- Exclude the affected cultural resource(s) from treatment unit boundaries (avoidance).
- Protect the affected cultural resource(s) through use of alternative treatment methods, such as conducting treatment during the winter, over frozen ground and snow.
- Mitigate adverse impacts to the site(s) through historical and archaeological data recovery.

A site-visit by resource specialists would be conducted this summer to determine the specifics of where these measures would be implemented.

### **Air Quality**

- Prior to initiating any burning activities, a burn plan in compliance with the Montana/Idaho Airshed Group Operating Guide would be completed.
- Location, timing and possible smoke effects would be disclosed in the local media and to local receptors prior to burning.
- During the burn implementation periods, the prescribed burn boss would be responsible for conducting a site-specific smoke analysis with current weather and air quality conditions prior to ignition. Using that information, the burn boss would identify any effects on residents located downwind of the project burn area.
- Coordination of prescribed fire activities in other project areas such as Clancy/Unionville would take place to ensure the amount of smoke would be manageable if multiple units across the project areas were burned.
- Appropriate warning signs would be placed on roads and highways to alert motorists of the possibility of smoke.

### **Weeds**

- Require all off road equipment to be cleaned before moving into treatment units; applies to both Forest Service and contractors.
- New infestations of noxious weeds, listed on the Montana State Noxious Weed List (2010), identified by either contractor or Forest Service in project area or on the haul route, shall be promptly reported to the other party.
- Pre-treat and post treat all temporary roads with herbicide used in this project.
- In Units 1-9 & 11-14, before unit treatments are implemented, apply spot treatment of weeds by walking through the units.
- In all units, in first season after unit treatments are complete, apply spot treatment of weeds by walking through the units, if necessary.
- In all units, No broadcast spraying of herbicide from trucks would be allowed, only OHV with jets or backpack with hand nozzle.
- An inspection of fire crew clothing (including boots) should be incorporated in morning briefing, prior to leaving for the project site, and after each work day prior to leaving the project site.
- Include weed education/information in burn plan and during pre-ignition crew briefings.

### **Fuels**

- Large diameter fuels within the units would be removed to an offsite location, where accessible.
- Small diameter fuels would be hand piled in small piles for burning.
- Large diameter fuels that are located in areas inaccessible by equipment would be cut into manageable sizes and placed in larger piles for burning.

- Pile burning would occur during periods that are consistent with frozen soil or heavy moisture in the ground.
- Pile size and burning periods would be designed in a manner to reduce soil disturbance and smoke impacts to the surrounding communities.
- A selection of broadcast, jackpot, and pile burning would be utilized to achieve objectives of reducing ground fuels and promoting regeneration.
- A prescribed fire plan that adheres to national and local policies would be designed for all burning actions.

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